

ABSTRACT

This disclosure provides a system for obtaining genetically altered primate pluripotent stem (pPS) cells. The pPS cells are maintained in an undifferentiated state by culturing on a feeder cell line that has been 5 immortalized and altered with drug resistance genes. Alternatively, the role of the feeder cells is replaced by supporting the culture on an extracellular matrix, and culturing the cells in a conditioned medium. The cells can be genetically altered with a viral vector or DNA/lipid complex, and then selected for successful transfection by drug-resistant phenotype in the transfected cells. The system allows for bulk proliferation of genetically altered pPS cells as important products for use in human therapy or drug screening.

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